REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-19 are pending in the present application. Of these claims, claim 1 and 9 are independent. The remaining claims are, directly or indirectly, dependent from claim 1 or 9.

Claim Amendments

By way of this reply, claims 3 and 11 have been amended without prejudice or disclaimer. Claims 1, 2, 4-10, and 12-19, which were directed to a resin composition or a resin molded product, have been amended to be directed to methods of improving an antistatistic characteristic of a resin. Further, the "hexafluorophosphate ion" as a constituent of the phosphonium salt has been deleted from the claims. No new matter has been added by way of these amendments. Support for the amendments may be found, for example, in paragraph [0086], [0087], [0089], and [0103] of the published specification.

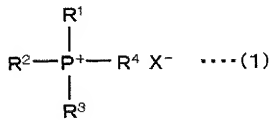
Rejection under 35 U.S.C. § 102

Claim 1-16 and 19 stand rejected under 35 U.S.C. § 102 (a) or (b) as being anticipated by U.S. Patent No. 5,118,346 ("Wehner"), Japanese Patent Application Publication No. H11-092751 ("Sanyo"), WO2001/87900 ("Cytec ('900)"), Canadian Patent Application Publication No. 2,343,456 ("Cytec ('456)"), or Japanese Patent Application Publication No. 2001-173592 ("Sumitomo"). By way of this reply, claims 3 and 11 have been canceled without prejudice or disclaimer. Therefore, regarding claims 3 and 11, the rejection is now moot. With

regard to claims 1, 2, 4-10, 12-16, and 19, independent claims 1 and 9 have been amended to clarify the claimed invention. Thus, to the extent that this rejection may still apply to independent claims 1 and 9, the rejection is respectfully traversed.

One or more embodiments of the claimed invention are directed to a method of improving an antistatistic characteristic of a resin, resin composition, or molded product. The present inventors discovered that by adding or mixing a specific phosphonium salts into a resin, the resin and a resin product may possess advantageous and improved characteristics. The advantageous characteristics include not only improvement of antistatic characteristics, but also maintenance of high transparency of a resin or a resin compound.

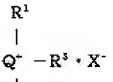
Accordingly, independent claims 1 and 9, as amended, requires, in part, a process of adding or mixing "phosphonium salts represented by the general formula (1):



wherein R^1, R^2, and R^3 are each a straight-chain or branched alkyl group having 3 to 8 carbon atoms, and R^4 is a straight-chain or branched alkyl group having 10 to 22 carbon atoms; each alkyl group may have substituted hydroxy group or alkoxy group; R^1, R^2, and R^3 may be the same or different from each another; and X^- is a tetrafluoroborate into a resin so as to improve an antistatic characteristic of the resin.

In contrast, Wehner shows compounds of the formula $R^1{}_3Y^+R^2X^-$, wherein R^1 and R^2 are alkyl, Y is P or N, and X is BF^4 or PF^6. However, Wehner neither teaches, nor suggests, any feature or method of using the compound as an agent to improve an antistatic characteristic of a resin or a resin composition, as does the claimed invention.

Sanyo show compounds as antistatic agents of the following formula:



wherein R^1-R^4 are substitutional groups, and X^- is a strongly acidic anion. Although Sanyo recites phosphorus as a possible selection for the elements Q in the claims, there is no teaching or suggestion of any compound including phosphorus as the element Q in the specification. In fact, in the Examples shown in Sanyo, only ammonium salt was evaluated in relation to polycarbonate resin, and no concrete disclosure was suggested regarding the phosphonium salt of a specified structure that configures the invention of the present patent application. Because there are great differences in the thermal decomposition temperatures of phosphonium salts and ammonium salts, it is not necessarily possible to equate the two chemistries for use as antistatic agents in plastic materials due to the high temperatures during mixing and molding (*See,* paragraph [0007] of the present application, as published).

Further, Application respectfully submits that MPEP states "When the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition,

anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated." (*See,* MPEP 2131.02 A).

In this case, in Sanyo, there is no teaching or suggestion of any specific compound structure, in particular for the substitutional groups R^1, R^2, and R^3 to be each a straight-chain or branched alkyl group having 3 to 8 carbon atoms, and R^4 is a straight-chain or branched alkyl group having 10 to 22 carbon atoms; wherein each alkyl group may have substituted hydroxy group or alkoxy group, as required by the claimed invention. Instead, Sanyo teaches merely a general and broad sense of R^1, R^2, R^3, and R^4 as nonionic chain including a divalent hydrocarbon group, an ether group, a thioether group, a carbonyl group, an ester group, an imino group, an amide group, an imido group, a urethane group, and containing one or more species of bases selected from a group which consists of heterocyclic structure containing an urea group, a carbonate group, a siloxy group and a nitrogen atom, or an oxygen atom. Thus, one of ordinary skill in the art could never anticipate the specific structure of formula (1) recited in claim 1 by such a general and broad sense of the compound formula disclosed in Sanyo.

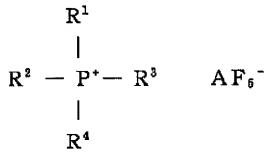
Therefore, Sanyo fails to teach or suggests the method of using a compound including phosphorus as the claimed element Q, particularly as an agent to be added into a resin so as to improve an antistatic characteristic together with maintaining high transparency of the resin, as does the claimed invention.

Cytec ('900) shows a phosphonium salt of the formula, $R^1R^2R^3R^4P^+X^-$, wherein R^1-R^4 are hydrocarbyl groups and X^- is a substitutable anion. However, similar to Wehner, Cytec ('900) neither teaches, nor suggests, any feature or method of using the compound as an

agent to improve an antistatic characteristic of a resin or a resin composition, as does the claimed invention.

Cytec ('456) shows a compound, "trihexyl (tetradecyl) phosphonium tetrafluoroborate." However, similar to Wehner and Cytec ('900), Cytec ('456) neither teaches, nor suggests, any feature or method of using the compound as an agent to improve an antistatic characteristic of a resin or a resin composition, as does the claimed invention.

Sumitomo shows compounds as antistatic agents of the following formula:



wherein R^1-R^4 are alkyl groups, and A is phosphorus or antimony. However, Sumitomo neither, shows nor suggests any compound including a tetrafluoroborate ion, as does the claimed invention.

In view of the above, independent claims 1 and 9 are patentable over Wehner, Sanyo, Cytec ('900), Cytec ('456), and Sumitomo because, whether considered separately or in combination, the references fail to teach or suggest, at least the feature, a process of adding or mixing phosphonium salts represented by the general formula (1) into a resin so as to improve an antistatic characteristic of the resin, as required by the claimed invention. By virtue of their dependence, claims 2, 4-8, 10, and 12-19 are also patentable at least for the same reasons as claims 1 and 9. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 1-19 stand rejected under 35 U.S.C. § 103 (a) as being obvious over Wehner, Sanyo, Cytec ('900), Cytec ('456), or Sumitomo in view of U.S. Patent No. 6,528,572 ("Patel"). As discussed above, by way of this reply, claims 3 and 11 have been canceled without prejudice or disclaimer. Therefore, regarding claims 3 and 11, the rejection is now moot. With regard to claims 1, 2, 4-10, and 12-19, independent claims 1 and 9 have been amended to clarify the claimed invention. Thus, to the extent that this rejection may still apply to independent claims 1 and 9, the rejection is respectfully traversed.

As discussed above, the claimed invention is directed to not only improving an antistatic characteristic, but also maintaining high transparency of a resin or a resin composition by using a specific phosphonium salts. However, none of Wehner, Sanyo, Cytec ('900), Cytec ('456), and Sumitomo teaches or suggests a process of adding or mixing phosphonium salts represented by the general formula (1) into a resin so as to improve an antistatic characteristic of the resin, as required by the independent claims 1 and 9. Patel does not provide that which Wehner, Sanyo, Cytec ('900), Cytec ('456), and Sumitomo lack with respect to claims 1 and 9. This is evidenced by the fact that Patel was cited as showing a conductive carbon nanotubes in a polymer composition which contains an antistatic agent. Patel does not show or suggest a compound of the formula (1) to be mixed with or added into a resin or a resin composition, as recited in the independent claims.

In view of the above, In view of the above, independent claims 1 and 9 are patentable over Wehner, Sanyo, Cytec ('900), Cytec ('456), Sumitomo, and Patel because, whether considered separately or in combination, the references fail to teach or suggest, at least the feature, "a process of adding or mixing "phosphonium salts represented by the general

formula (1) into a resin so as to improve an antistatic characteristic of the resin," as required by the claimed invention. By virtue of their dependence, claims 2, 4-8, 10, and 12-19 are also patentable at least for the same reasons as claims 1 and 9. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 07200/070001).

Dated: July 11, 2008

Respectfully submitted,

By _____

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